



EXAMINATIONS COUNCIL OF ESWATINI  
Eswatini General Certificate of Secondary Education

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**MATHEMATICS**  
**SPECIMEN PAPER**

**6880/03**

Paper 3

**October / November 2021 - 2023**

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***MARK SCHEME***

***{6880/03}***

***Confidential***

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This paper consists of 3 printed pages.

Question	Answers	Marks	Notes
1	$7.49 \times 10^{-5}$	B1	
2	15.89021378	B1	
3	Positive Correlation	B1	
4	$-3(^{\circ}\text{C})$	B1	
5	$\frac{10}{3} - \frac{5}{2}$ $\frac{20}{6} - \frac{15}{6}$ $\frac{5}{6}$	M1  M1  A1	
6	$(2m+n)(2m-n)$	B1B1	
7	$\frac{1}{2} \times 14.35 \times 5.75$ 41.25625	M2  A1	M1 for 14.35 and 5.75 seen  Accept 3 s.f. or better
8	$\frac{2\pi r}{4} = 12$ o.e 7.64	M1  A1	
9 (a)(i)	$5^{-2}$	B1	
(ii)	$\frac{1}{25}$	B1	
(b)	$\frac{1}{8}$	B1	
10	$65(^{\circ})$ , corresponding $56(^{\circ})$ , sum of interior angles of a triangle	B1B1 B1B1	
11 (a)	$9n - 4$	B2	B1 for $9n$ seen
(b)	$(n+3)^2$ oe	B2	B1 for $n^2$ soi
12 (a)	$y = \frac{72}{(x+1)^2}$	B2	B1 for 72 seen
(b)	32	B1	
13	$\frac{10854}{64}$ 169.59375 or $169\frac{19}{32}$	M2  A1	M1 for 64:27
14 (a)(i)	$(y =) \sin x$	B1	
(ii)	one	B1	
(b)(i)	51.7 and 128.3	B1B1	
(ii)	131.8 and 228.2	B1B1	
(iii)	154.6 and 334.6	B1B1	

<b>15(a)</b>	$3 \times \sqrt{(-3)^2 + 5^2}$ 17.5	M2 A1	M1 for $(-3^2) + 5^2$ o.e
<b>(b)</b>	$\begin{pmatrix} -24 \\ -1 \end{pmatrix}$	B2	B1 for $\begin{pmatrix} 21 \\ 6 \end{pmatrix}$
<b>16</b>	$x = 7$ and $y = -2$	B3	B2 for one correct value B1 for eliminating one variable correctly
<b>17 (a)</b>	$8^2 + 10^2 - 2 \times 8 \times 10 \times \cos 78^\circ$ $164 - 160 \cos 78^\circ$ $\sqrt{130.7}$ 11.4	M1 M1 M1 A1	M1 for $8^2 + 10^2 + 2 \times 8 \times 10 \times \cos 78^\circ$
<b>(b)</b>	$\frac{1}{2} \times 8 \times 10 \times \sin 78^\circ$ 39.1	M1 A1	
<b>18 (a)</b>	$\frac{5x - 2(x+3)}{x(x+3)}$ $\frac{3x - 6}{x(x+3)}$	M1 A1	
<b>(b)</b>	$\frac{x(x-3)}{(x+4)(x-3)}$ $\frac{x}{x+4}$	M2 A1	M1 for $x(x-3)$ or $(x+4)(x-3)$
<b>19</b>	For formula $\frac{p \pm \sqrt{q}}{r}$ , $p = -7$ , $q = 73$ , $r = 4$ 0.39, -3.89	B2 B1B1	B1 for $p = -7$ and $r = 4$ B1 for $q = 73$
<b>20 (a)</b>	$\frac{-3}{4}$	B1	
<b>(b)</b>	$\frac{4}{3}$ oe	$\sqrt{B1}$	
<b>(c)</b>	$3x + 4y = 1$ oe	$\sqrt{B2}$	$\sqrt{B1}$ for $c = \frac{1}{4}$ seen
<b>21</b>	$x + y \leq 8$ oe $x \geq y$	B2 B1	B1 for correct equation
<b>22 (a)</b>	44	B1	
<b>(b)</b>	40	B1	
<b>(c)</b>	$\frac{697}{25}$ 27.88	M2	M1 for dividing by 25

		A1	
23 (a)	$\frac{(16 \times 498) + (74 \times 502) + (104 \times 506) + (6 \times 509)}{200}$ $\frac{100974}{200}$ $503.97$	M2 M1 A1	M1 for one error in numerator  B1 for 18.5 and 26 B1 for 3
(b)	18.5, 26, 3	B2	